

Appl. No. 09/681,571  
Amdt. Dated 21 June 2005  
Reply to Office action of 9 June 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1 (previously presented). A method for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the method comprising:

determining effects on at least one of keybar voltage or keybar current of adjusting positions of the keybars with respect to positions of the phase belts; and

selecting a position of the keybars with respect to a position of the phase belts which provides minimal keybar voltage.

2 (previously presented). The method of claim 1 further comprising determining effects of adjusting the number of keybars, and wherein selecting the position of the keybars comprises selecting both the position of the keybars and a number of the keybars to provide minimal keybar voltage.

3 (previously presented). The method of claim 1 further comprising determining effects of adjusting the number of stator slots, and wherein selecting the position of the keybars comprises selecting both the position of the keybars and a number of the stator slots to provide minimal keybar voltage.

4 (previously presented). The method of claim 1 further comprising determining effects of adjusting a direction of rotation of a rotor with respect to the stator, and wherein selecting the position of the keybars comprises selecting both the position of the keybars and a direction of rotation to provide minimal keybar voltage.

5 (previously presented). A method for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the method comprising:

determining effects on at least one of keybar voltage or keybar current of adjusting positions of the keybars with respect to positions of the phase belts, adjusting the number of keybars, and adjusting the number of stator slots; and

selecting a position of the keybars with respect to a position of the phase belts, a number of the keybars, and a number of stator slots which collectively provide minimal keybar voltage.

6 (previously presented). The method of claim 5 further comprising determining effects of adjusting a direction of rotation of a rotor with respect to the stator, and selecting a direction of rotation to provide minimal keybar voltage.

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7 (previously presented). A method for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the method comprising:

determining effects on at least one of keybar voltage or keybar current of adjusting the number of keybars; and

selecting a number of the keybars which provides minimal keybar voltage.

8 (previously presented). The method of claim 7 further comprising determining effects of adjusting the number of stator slots, and wherein selecting the number of the keybars comprises selecting both the number of the keybars and a number of the stator slots to provide minimal keybar voltage.

9 (previously presented). A method for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the method comprising:

determining effects on at least one of keybar voltage or keybar current of adjusting the number of stator slots; and

selecting a number of the stator slots which provides minimal keybar voltage.

10 (previously presented). A method for operating an electric machine comprising a rotor and a stator comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the method comprising selecting a direction of rotation of the rotor which provides minimal keybar voltage.

11 (previously presented). A system for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the system comprising:

means for determining effects on at least one of keybar voltage or keybar current of adjusting positions of the keybars with respect to positions of the phase belts; and

means for selecting a position of the keybars with respect to a position of the phase belts which provides minimal keybar voltage.

12 (original). The system of claim 10 wherein the means for determining and the means for selecting comprise a computer.

13 (previously presented). A system for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the system comprising:

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means for determining effects on at least one of keybar voltage or keybar current of adjusting positions of the keybars with respect to positions of the phase belts, adjusting the number of keybars, and adjusting the number of stator slots; and

means for selecting a position of the keybars with respect to a position of the phase belts, a number of the keybars, and a number of stator slots which collectively provides minimal keybar voltage.

14 (previously presented). A system for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the system comprising:

means for determining effects on at least one of keybar voltage or keybar current of adjusting the number of keybars; and

means for selecting a number of the keybars which provides minimal keybar voltage.

15 (previously presented). A system for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the system comprising:

means for determining effects on at least one of keybar voltage or keybar current of adjusting the number of stator slots; and

means for selecting a number of the stator slots which provides minimal keybar voltage.

16 (previously presented). A system for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the system comprising a computer for performing simulations to determine effects on at least one of keybar voltage or keybar current of adjusting positions of the keybars with respect to positions of the phase belts.

17 (previously presented). A system for designing a stator for an electric machine comprising lamination segments coupled to a stator frame by keybars and stator winding phase belts within stator slots of the lamination segments, the system comprising a computer for performing simulations to determine effects on at least one of keybar voltage or keybar current of adjusting positions of the keybars with respect to positions of the phase belts, adjusting the number of keybars, and adjusting the number of stator slots.

18 (new). The method of claim 1 wherein determining effects on at least one of keybar voltage or keybar current of adjusting positions of the keybars with respect to positions of the phase belts comprises physical testing.